

## REMARKS

### I. Status Summary

Claims 1-13 are pending in the present application. Claims 1-13 have been examined by the U.S. Patent and Trademark Office (hereinafter "the Patent Office") and currently stand rejected. The Patent Office has indicated that claim 13 might be made the subject of an objection.

Claim 1 has been canceled. Claims 2, 5-8, 10, 12, and 13 have been amended. Support for the amendments can be found throughout the specification and claims as originally filed. No new matter has been added.

Reconsideration of the application in view of the amendments and the remarks set forth herein below is respectfully requested.

### II. Priority

Applicants respectfully submit that a copy of the English translation of the priority document, Japanese Patent Application No. 2004-064520, is being filed herewith, together with a statement of true and accurate translation. Consequently, applicant respectfully submits that they have perfected their claim to priority to Japanese Patent Application No. 2004-064520, and the instant application should thus be awarded a priority date of March 8, 2004.

### III. Response to Objections

The Patent Office has indicated that if claim 11 is found allowable, claim 13 will be objected to under 37 C.F.R. as being a substantial duplicate thereof.

Without acquiescing to the Patent Office's remarks, and in an effort to expedite the allowance of the subject application, applicants respectfully submit that claim 13 has been amended to recite wherein the cross-linkable polymer is a polymer obtained by polymerizing one type of A1) monomer. Support for the amendment can be found in claim 10 as originally filed. No new matter has been amended. Accordingly, applicants respectfully submit that the Patent Office's comments regarding claim 13 have been addressed. Therefore, applicants respectfully request that the instant objection be

withdrawn. Further, applicants respectfully believe that claim 13 is in condition for allowance, and a Notice of Allowance to that effect is respectfully requested.

IV. Response to Rejections under 35 U.S.C. § 102(b) over Zecca

Claims 1 and 5-10 have been rejected under 35 U.S.C. § 102(b) over Zecca et al. (*J. Mol. Catalysis A: Chemical*, 129 (1998), 27-34; hereinafter "Zecca"). The Patent Office contends that Zecca discloses a polymer-supported metal cluster composition (PSMCC) comprising Pd<sup>0</sup> supported by a cross-linked polymer, obtained by cross-linking a cross-linkable polymer containing both hydrophobic and hydrophilic side chains, wherein the hydrophilic side chain has a cross-linkable functional group and the hydrophobic side chain is free of hydrophilic substituents and cross-linkable functional groups.

After careful consideration of the rejection and of the Patent Office's comments, applicants respectfully traverse the rejection and offer the following remarks.

Initially, applicants respectfully submit that claim 1 has been canceled herein, thereby rendering the rejection with regard to claim 1 moot.

In view of the cancellation of claim 1, claim 2 has been amended to independent form and each of claims 5-8 and 10 have been amended to depend from claim 2. Support for the amendments can be found in claims 1, 2, 5-8, and 10 as originally filed and in the instant specification as filed, for example, at paragraphs [0005], [0006], [0013], [0014], and [0035].

Particularly, as claim 2 was not included in the instant rejection, applicants respectfully believe that claim 2 is distinguishable from Zecca.

Each of claims 5-10 depend or ultimately depend from claim 2, and therefore, include each and every element of claim 2. Since claim 2 is believed to be distinguishable from Zecca, applicants respectfully submit that claims 5-10 are also distinguishable from Zecca.

Accordingly, applicants respectfully request that the rejection of claims 5-10 under 35 U.S.C. § 102(b) over Zecca be withdrawn. Applicants further respectfully request that claims 5-10 be allowed at this time.

V. Response to Rejections under 35 U.S.C. § 102(a) over Kobayashi

Claims 1-3 and 5-13 have been rejected under 35 U.S.C. § 102(a) as allegedly being anticipated by PCT International Publication No. WO 2004/024323 to Kobayashi et al. (hereinafter "Kobayahsi"). The Patent Office contends that Kobayashi discloses a PSMCC comprising Pd<sup>0</sup> supported by a cross-linked polymer that can be obtained by cross-linking a cross-linkable polymer containing both hydrophobic and hydrophilic side chains, wherein the hydrophilic side chain has a cross-linkable functional group and the hydrophobic side chain is free of hydrophilic substituents and cross-linkable functional groups. The Patent Office further contends that the PSMCC of Kobayashi can be prepared in solution by supporting the Pd<sup>0</sup> upon/within a dissolved, cross-linkable polymer, and then cross-linking the polymer and that pre-crosslinking micelle formation is implied.

Applicants respectfully traverse the rejection and offer the following remarks.

Initially, as described hereinabove, applicants respectfully submit that claim 1 has been canceled herein, thereby rendering the rejection with regard to claim 1 moot.

Claim 2 has been amended to independent form, incorporating the subject matter of claim 1. Support for the amendment to claim 2 can be found in claims 1 and 2 as originally filed, and in the instant specification as originally filed, for example, at paragraphs [0005], [0006], [0013], [0014] and [0035].

In view of the cancellation of claim 1, each of claims 5-8, 10 and 12 have been amended to depend from claim 2. Support for the amendments can be found in claims 1, 2, 5-8, 10, and 12 as originally filed and in the instant specification as originally filed, for example, at paragraphs [0005], [0006], [0013], [0014], and [0035]. In addition, claim 12 has been reworded to recite a method for performing a hydrogenation reaction, a dehydrogenation reaction, an oxidation reaction, an allylic substitution reaction, a coupling reaction or a carbonylation reaction, wherein the method comprises catalyzing the reaction with a composition of claim 2. Support for the rewording can be found in claim 12 as originally filed.

Claim 13 has been amended to recite a polymer obtained by polymerizing one type of A1) monomer. Support for the amendment can be found in claim 10 as originally filed.

Without acquiescing to the Patent Office's contentions regarding Kobayashi, applicants respectfully submit that the subject application claims priority to Japanese Patent Application No. 2004-064520, filed on March 8, 2004. As described hereinabove, an English translation of Japanese Patent Application No. 2004-064520 and a statement of true and accurate translation are being filed herewith. Thus, applicants respectfully submit that the subject application has an effective filing date that precedes the publication of Kobayashi. Accordingly, applicants respectfully request that Kobayashi be removed as a reference against the subject application and that the rejection of claims 2, 3, and 5-13 under 35 U.S.C. § 102(a) over Kobayashi be withdrawn. Applicants further ask that claims 2, 3, and 5-13 be allowed at this time.

VI. Response to Rejections over 35 U.S.C. § 102(a)/103(a) over Kobayashi

Claims 1-13 have been rejected under 35 U.S.C. § 102(a) or 35 U.S.C. § 103(a) as allegedly being anticipated by, or in the alternative, as allegedly being unpatentable over Kobayashi.

Applicants respectfully traverse the rejection and offer the following remarks.

Initially, as described hereinabove, applicants respectfully submit that claim 1 has been canceled herein, thereby rendering the rejection with regard to claim 1 moot.

Claim 2 has been amended to independent form, incorporating the subject matter of claim 1. Support for the amendment to claim 2 can be found in claims 1 and 2 as originally filed, and in the instant specification as originally filed, for example, at paragraphs [0005], [0006], [0013], [0014] and [0035].

In view of the cancellation of claim 1, each of claims 5-8, 10 and 12 have been amended to depend from claim 2. Support for the amendments can be found in claims 1, 2, 5-8, 10, and 12 as originally filed and in the instant specification as originally filed, for example, at paragraphs [0005], [0006], [0013], [0014], and [0035]. In addition, claim 12 has been reworded to recite a method for performing a hydrogenation reaction, a dehydrogenation reaction, an oxidation reaction, an allylic substitution reaction, a coupling reaction or a carbonylation reaction, wherein the method comprises catalyzing the reaction with a composition of claim 2. Support for the rewording can be found in claim 12 as originally filed.

Claim 13 has been amended to recite a polymer obtained by polymerizing one type of A1) monomer. Support for the amendment can be found in claim 10 as originally filed.

Without acquiescing to the Patent Office's contentions regarding Kobayashi, applicants respectfully submit that the subject application claims priority to Japanese Patent Application No. 2004-064520, filed on March 8, 2004. As described hereinabove, an English translation of Japanese Patent Application No. 2004-064520 and a statement of true and accurate translation are being filed herewith. Thus, applicants respectfully submit that the subject application has an effective filing date that precedes the publication of Kobayashi. Accordingly, applicants respectfully request that Kobayashi be removed as a reference against the subject application and that the rejection of claims 2-13 under 35 U.S.C. § 102(a) and/or 35 U.S.C. § 103(a) over Kobayashi be withdrawn. Applicants further ask that claims 2-13 be allowed at this time.

VII. Response to Rejections over 35 U.S.C. § 103(a) over Zecca in view of Akiyama

Claims 1, 5-10, and 12 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Zecca in view of Akiyama et al. (*J. Am. Chem. Soc.*, 125, 3412-3413 (2003); hereinafter "Akiyama"). The Patent Office concedes that Zecca fails to explicitly teach the use of its composition in one or more of the reactions of instant claim 12. The Patent Office alleges that this deficiency is overcome by Akiyama.

Applicants respectfully traverse the rejection and offer the following remarks.

Initially, applicants respectfully submit that claim 1 has been canceled herein, thereby rendering the rejection with regard to claim 1 moot.

In view of the cancellation of claim 1, claim 2 has been amended to independent form and each of claims 5-8, 10, and 12 have been amended to depend from claim 2. Support for the amendments can be found in claims 1, 2, 5-8, 10, and 12 as originally filed and in the instant specification as filed, for example, at paragraphs [0005], [0006], [0013], [0014], and [0035]. In addition, claim 12 has been reworded to recite a method for performing a hydrogenation reaction, a dehydrogenation reaction, an oxidation reaction, an allylic substitution reaction, a coupling reaction or a carbonylation reaction,

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wherein the method comprises catalyzing the reaction with a composition of claim 2. Support for the rewording can be found in claim 12 as originally filed.

As claim 2 was not included in the instant rejections, applicants respectfully believe that claim 2 is distinguishable from the cited combination.

Each of claims 5-10 and 12 depend or ultimately depend from claim 2, and therefore, include each and every element of claim 2. Since claim 2 is believed to be distinguishable from the cited combination, applicants respectfully submit that claims 5-10 and 12 are also distinguishable from the cited combination.

Accordingly, applicants respectfully request that the rejection of claims 5-10 and 12 under 35 U.S.C. § 103(a) over Zecca and Akiyama be withdrawn. Applicants further respectfully request that claims 5-10 and 12 be allowed at this time.

#### CONCLUSIONS

Should there be any minor issues outstanding in this matter the Examiner is respectfully requested to telephone the undersigned attorney. Early passage of the subject application to issue is earnestly solicited.

#### DEPOSIT ACCOUNT

The Commissioner is hereby authorized to charge any other fees associated with the filing of this correspondence to Deposit Account Number 50-0426.

Respectfully submitted,

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Date: 10/5/2011

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Enclosure